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ABSTRACT

The recent history of apprenticeship in Great Britain was examined to identify the issues arising from the latest reforms and future expansion of the system. A team of university academics with strong research interests in training and skills collected information from a large body of academic work in the field of apprenticeship and training and from the contributions of participants at a 1-day seminar. The analysis established that, although the British apprenticeship model of learning and training still enjoys status, failure to modernize and reform the apprenticeship system in the 1970s-1980s has led to a serious decline in numbers trained. The Modern Apprenticeship model was deemed a sound foundation for progress, and a number of ways of further strengthening it were identified. The following policy recommendations were offered: (1) target higher numbers for apprenticeship; (2) improve training content and assessment; (3) develop new pathways leading to apprenticeship; (4) develop new pathways leading from apprenticeship to higher education and full professional status; (5) strengthen sector bodies and employer organizations; (6) encourage employer cooperation to guarantee product and service standards to the consumer; (7) guarantee government financial support for Modern Apprenticeship to all who undertake to train to the required standard; and (8) rethink apprentice status and remuneration. (MN)

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APPRENTICESHIP: A STRATEGY FOR GROWTH

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by

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INTRODUCTION

This brief report aims to set out for a wide readership the recent history of apprenticeship in Britain, and the complex set of issues that are raised by recent reforms and future expansion. We set out our conclusions about the current health of apprenticeship in Britain and propose a number of policy measures that we consider could speed up the further development of apprenticeship. The authors are university academics with strong research interests in training and skills and more particularly in the area of apprenticeship. We undertook this task because we believe that apprenticeship has considerable potential for promoting the economic development and welfare of Britain and for improving the life chances of young people. We speak for no interest groups. The report is deliberately written in what we hope is a highly accessible style. We have not included tables, footnotes and references to academic sources in the text in order to improve readability. However, we have, of course, drawn heavily upon a large body of academic work in the field of apprenticeship and training which we reference at the end of the report. In addition, we benefited greatly from the contributions of participants in a one-day seminar held at the LSE in April of this year and from comments from a number of experts. Their names are given above. However, responsibility for the views expressed below rests with the authors.

EXECUTIVE SUMMARY AND POLICY RECOMMENDATIONS

Summary

Although the apprenticeship model of learning and training still enjoys status among young people and their parents in Britain, failure to modernise and reform in the 1970s and 1980s led to a serious decline in numbers trained. Modern Apprenticeship, introduced five years ago, is based on improved principles of cost-sharing between employers, young people and government and provides a foundation on which to expand provision. While Modern Apprenticeship has started to reverse the long decline in numbers entering apprenticeship, these are still low relative to other countries and also relative even to numbers in the early 1990s.

In our report we set out reasons why action should be taken now to exploit the potential of apprenticeship in Britain and expand numbers entering apprenticeship training. We point to a number of sectors, some with large numbers of employees, which currently carry out little or no apprentice training. We also point to the example of Germany where nearly two thirds of a notional cohort of young people enter apprenticeship training and the supply of places typically exceeds demand from young people.

Britain has serious skill shortages and enduring skills gaps at the skilled crafts, technician and associate professional level. These shortages have consequences for the economy as whole, contributing to wage inflation and making macro-economic policy management more difficult by pushing up wages and lowering productivity growth in the longer term.

The expansion of full-time post-16 education over the past ten years has helped to produce many more academic qualifications. However, the proportion of young people holding vocational qualifications at NVQ Level 3 as their highest qualification has hardly increased. Modern Apprenticeship programmes, which aim for high levels of skill and training together with college-based technical and general education, can supply these vital skills.

Because apprenticeship consists in part of structured learning in the workplace, its extension to more workplaces will also have wider benefits. It particular, the learning infrastructure developed to support apprenticeship in a firm can make a powerful contribution to creating the 'learning workplace' needed to provide learning opportunities for employees of all ages.

The wide-ranging personal and social skills that are increasingly sought by employers are best developed in the 'real life' situations experienced in the programmes of workplace learning provided in apprenticeship. Moreover many young people flourish in the more adult atmosphere of the workplace and benefit from learning away from a classroom atmosphere.

Apprenticeship can be expected to improve the employment, earnings and career prospects of young people. The expansion of apprenticeship opportunities that we recommend - a doubling of current starts within five years and a further increase within ten years- would, if attained, improve the prospects of many young people. We would expect this expansion to lead to around one third of every cohort of young people continuing their education and training through the apprenticeship route by 2008.

We maintain that apprenticeship can also be inclusive and offer opportunities to all ambitious and motivated young people. All Modern Apprenticeships are expected to aim for high standards, but employers look for a range of qualities in young people and not just academic attainment. Other aptitudes and qualities are important and mean that apprenticeship can offer a wider range of learning opportunities to a wider range of young people than can be provided in schools and colleges.

While we find that the Modern Apprenticeship framework provides a sound foundation for progress, we also believe it should be strengthened in a number of ways. Many young people wisely want to keep open the option of entering courses of higher education when making post-16 choices. Many of the more able students, for whom apprenticeship would be a highly suitable choice, will only opt for that path if it offers the clear opportunity of qualifying for further study at sub-degree and degree level. One of the important developments needed in Modern Apprenticeship is the provision of clear routes through from apprenticeship at NVQ Level 3 to part-time or full-time learning at NVQ Levels 4 and 5 (higher education).

For that to happen, the educational content of apprenticeship must be strengthened. We welcome the inclusion within Modern Apprenticeship of key skills, but we point out that the standards of general education aimed at are still well below the levels expected in apprenticeship in other European countries. These countries also insist on an underpinning technical knowledge component in apprenticeship. Some Modern Apprenticeships already require apprentices to follow courses of underpinning technical education but most do not. We would like to see key skills gradually strengthened and a technical knowledge component (for example, City & Guilds or Ordinary National Certificate type courses) extended to all Modern Apprenticeships. We see this as essential to provide a firm foundation for subsequent progress to higher levels of skill - either through entry to higher education or through lifelong learning.

A number of issues urgently require resolution if apprenticeship is to expand. As we make clear, society and the economy generally benefit from the skills produced in apprenticeship and we therefore consider it right that government should contribute to its cost. Employers who provide apprentice places to the standards required of Modern Apprenticeship incur significant costs which can often be only partly offset by productive work undertaken by apprentices. To recoup costs, employers need to be able to retain good ex-apprentices without paying excessive wage premiums. This points to the need to resolve the 'poaching' problem.

The sharing of costs between employers, young people and government must be resolved in such a way that the supply of apprentice places is sufficient to expand apprenticeship, standards remain high and young people come forward in sufficient numbers to fill the places offered. The scope for redistributing training costs away from employers and towards trainees and government, particularly in high cost sectors such as engineering and building, requires further consideration. When high quality training is provided, young people also benefit and should be prepared to accept a lower wage in the initial year or two of training than apprentices have traditionally received.

Employers need to take action to resolve the incentive problem raised in our report so as to ensure that firms are not unduly deterred from offering apprenticeships by fear of 'poaching' of trained workers. Specific suggestions as to how this could be achieved are made below. Information flows to firms and young people concerning the benefits of apprenticeship are currently inadequate and are responsible for artificially constraining demand. The current arrangements for matching young people to apprenticeship places at local level do not always seem to work well and, we suspect, lead to the loss of potential apprentice places.

Conclusions

If apprenticeship is to retain its key strengths of closely reflecting the demand for skills and offering training to standards required for effectiveness in the workplace, employers must continue to be the primary decision-makers about how many apprenticeships to offer and the skill standards aimed for.

This means that initiatives for expanding apprenticeship must be addressed in the first instance to employers. But, as we have pointed out, the type of employer organisation which underpins apprenticeship in the German-speaking countries is largely absent in Britain. It is widely recognised that in Britain, where firms do maintain contact with a formal organisation this is frequently trade, sector or occupationally based. This too is the pattern that can be observed abroad. The decision to develop Modern Apprenticeship in Britain in conjunction with organisations representative of the sectoral groupings of employers confirms this view. We conclude that the main vehicle for taking responsibility for expanding apprenticeship should be the newly-established National Training Organisations which represent the main sectors of British business. They are best placed to ascertain skill needs in their sectors and plan how these can be met. We also conclude that considerable strengthening of these organisations will be required if they are to act effectively in the interests of British business and of the economy as a whole.

While we firmly believe that the responsibility for decisions to offer apprenticeship places must rest with employers, there is still much that the government can do to encourage this offer without resort to further legislation. We have pointed in particular to two sectors, electrical contracting and the travel business. Both

in their own way are exemplary and point to ways of raising the demand for skills.

In the first instance, as in the case of electrical contracting, more stringent standards in sectors where public safety needs to be strengthened could be introduced and expressed in terms of the proportion of employees trained to work to those safety standards. The training and skills of those employed to inspect and service gas appliances is a case in point.

Where safety standards are a matter of life and death there is clearly a case for putting them in place and enforcing them through inspection. But there are other areas where *quality* of service is important and where a standards-based approach to quality assurance may not be appropriate. In a number of areas, for example residential care homes, the government's policy with respect to the protection of the public and the consumer is based on a dual policy of standard-setting and inspection. An alternative approach - and one adopted in other European countries - is to ensure that a good proportion of staff in these sectors is trained to deliver the quality of service considered desirable. This in turn encourages the development of a self-regulatory professional ethos in the occupation in question. An expansion of apprenticeship training would provide a cost-effective way of reaching these standards and encourage a professional approach in a much wider range of sectors and occupations.

Professionalism is particularly appropriate in high trust occupations. Other sectors where the public chooses to purchase a service should be encouraged by government to think in terms of defining standards of product or service quality that kite-marked firms would guarantee to deliver. This is the model that has already been developed - albeit with the stimulus of European legislation - in the travel industry. But other sectors could with advantage follow this model. Firms would come together to agree a common guarantee of service/product quality and take out collective insurance to compensate the customer when standards are not met. Apprenticeship training would ensure the supply of skills which would make it possible to work to consistently high standards. When as a result of increased skills, claims for sub-standard work decreased, insurance premiums of all firms in the scheme would also fall.

Benefits of this initiative would not only be the expansion in apprenticeship places but also benefits to the consumer of guaranteed standards of product quality and service. There is evidence that in some sectors - for example home building repairs - demand for the product has been suppressed by fears of poor and unreliable service. Once consumers have a proper guarantee we could expect this demand to be released and lead to increased consumption.

As we have explained, we see the low level of supply of apprentice places by firms as the main obstacle to the expansion of apprenticeship. This low supply of apprenticeships is not necessarily evidence of a low level of skill need. All the evidence points in the other direction. But we see the supply of places held back by poor information flows and weak employer organisations especially at the local level. We would like employers to reconsider the level of apprentice salaries - currently relatively high - so that a larger number of apprenticeship places can be provided. We also consider that, if the quality of apprenticeships can be

improved along the lines that we suggest, young people will be content with more modest earnings while in training. A distinct contractual status for apprentices as exists in Germany could contribute to greater cost-sharing by young people. We also consider that demand for apprentices can be stimulated by direct and indirect government action to protect consumers of goods and services. This would take the form of strengthening safety standards in some sectors and encouraging groups of firms to assume collective liability for guaranteed quality standards.

Finally, however, there is much evidence that some demand from employers for apprentices is unmet because government funding for apprentices is effectively 'rationed' so that not all who want it can obtain it. We would like to see government finance for apprenticeship places expand in line with the demand from firms. In some sectors, where training costs are high, a higher per capita government subsidy is justified. However, we recognise that if demand grows, as we hope and expect it will, the financing of post-16 education and training will have to be fundamentally rethought, perhaps along the lines of individual entitlement to replace the block grant transfers by which full-time education and training post-16 is currently financed.

POLICY RECOMMENDATIONS

Higher target numbers for apprenticeship

We recommend that the government set a target of doubling the current number of starts on Modern Apprenticeship programmes within five years and a second target of increasing that number again within ten years. In consultation with NTOs, this overall target would be broken down into agreed targets for each sector corresponding to skill needs. We argue that this expansion can be justified on grounds of wide benefits to society and to the economy. Our initial target (for England and Wales) of some 150,000 starts a year within five years would result in around a quarter of a cohort entering apprenticeship annually. Our longer term target would result in around one third of a cohort entering apprenticeship annually within ten years.

Improved training content and assessment

The content of apprenticeship programmes should be reviewed and an underpinning component of technical knowledge specified for each apprenticeship programme in addition to NVQ units and key skills. Underpinning technical knowledge should be externally assessed using standard instruments along the lines currently being piloted for the assessment of key skills.

New pathways leading to apprenticeship

We have upheld the model of apprenticeship which sees it as a programme of education and training leading to demanding standards of skill in every sector. The decision to take on an apprentice will rest with employers. Not all young people who seek a place will find one immediately in the sector of their choice. Those 16 and 17 year olds who find that they do not yet meet the requirements for entry to an apprenticeship in the sector of their choice could enter pre-apprenticeship courses in full-time education, designed to prepare for employment as an apprentice. National Traineeships could perform a similar role.

New pathways leading from apprenticeship to higher education and full professional status

We have already recommended more demanding content in apprenticeship programmes. This is in part because we see high quality training to recognised standards as a way of attracting young people into apprenticeship. But we also point out that this is no longer a sufficient attraction. Many, although perhaps not all, sector organisations will need to work with business in their sector and with higher education to develop a route through from apprenticeship to professional qualifications at sub-degree and degree level. Such a development (currently largely confined to one or two sectors) could lead to many more talented young people seeking to follow the apprenticeship route. Assessment and certification of apprenticeship should be reviewed with the aim of developing pathways from apprenticeship to higher education.

Stronger sector bodies and employer organisations

The newly-created sector training bodies (NTOs), which bring together the range of trade and business organisations within the sector, should be strengthened by making membership of the relevant body compulsory for all businesses based on payment of an annual subscription. In cases where training is costly and skills are used in a range of sectors, notably engineering craft workers and technicians, the organisation of NTOs should be adjusted towards an occupational rather than a purely sectoral basis. The income derived from firms' annual subscriptions should be set at a level sufficient to enable NTOs to undertake a range of educational and marketing activities. In this way NTOs would actively work to try to ensure that sufficient places are offered by firms to meet overall sector needs. Trade unions and other employee organisations can play an important role in this process by participating in the identification of future skill requirements and in urging management to offer apprenticeship places. Their current partial and informal presence on NTOs should therefore be formalised. NTOs would also be expected to ensure that apprenticeships offered in their sector are marketed to young people in such a way that apprenticeship is not held back by information failure. Finally, NTOs would be responsible for liaising with TECs and thereby ensuring that in every region and locality firms willing to offer apprenticeship places are identified, enabled to access government funding and put in a position to interview suitable candidates.

Government encouragement of employer cooperation to guarantee product and service standards to the consumer

Some sectors of business and industry will only appreciate the need for higher skill standards if standards of quality and service in the sector are raised. We see a role for government in setting higher safety standards where appropriate and encouraging employers in a range of sectors to agree quality standards and to make

collective arrangements to guarantee those standards through liability insurance. Such action will raise the demand for apprenticeship training, benefit the consumer and increase business volumes.

Financial support from government for Modern Apprenticeship to be guaranteed to all who undertake to train to the required standard

The expansion of apprenticeship which we call for can only take place if government is willing to provide the recognised level of financial support for employers willing to take on apprentices. This may eventually require a rethinking of arrangements for financing 16-19 year old education and training provision. Where apprenticeship is particularly costly to employers, as in engineering, public funding should be correspondingly higher, provided that employers fully explore the scope for reducing apprentice pay relative to traditional (high) levels.

Apprentice status and remuneration to be rethought

Apprentice status and remuneration should be systematically differentiated from that of both National Trainees and regular youth employees, with a view to limiting apprentice pay and developing a distinct 'apprentice identity'. This would reduce the costs of training to employers and facilitate the offer of more places. High quality training programmes provide sufficient incentives to young people to start and complete training even at low to moderate apprentice pay rates.

1.1 Britain's skills gap

Skill formation in Britain

Every upturn in the British economy brings the familiar complaint from business of skill shortages. But these acute shortages constitute the tip of a large iceberg of hidden long-term deficiencies that employers' organisations persistently identify. Reports from the Institute of Directors and the organisation *Education for Industry* - and most recently from the government's Skills Task Force - are but the latest in a long series of concerned analyses of low levels of skill in the British workforce compared to competitor countries. When we compare stocks of intermediate skills in the population of working age in the UK and Germany at two points in time, 1985 and 1996, we can see that the gap between the UK and Germany is very large and hardly changes over the period. Even if we look at the younger population in the two countries we can see that the gap is still considerable and narrows only slightly. In the UK in 1985, 44 per cent of all 25-28 year olds were qualified to Level 3 (A-level or vocational equivalent) or above; in Germany, 82 per cent had Level 3 or above. In 1996 the corresponding figures were 54 per cent in the UK and 87 per cent in Germany.

Engineering and construction training in Britain and Germany

The same story emerges when we look at numbers qualifying in specific occupations over time. Numbers qualifying in engineering expressed as a percentage of employment in the sector were four times greater in Germany in 1985 and the gap remains the same in 1996. In construction, the gap has widened and the construction industry in Britain faces skill shortages and consequent inflationary wage pressures.

No skills gap at graduate level

In studies carried out at the National Institute of Economic and Social Research (NIESR) researchers found that the great difference between Britain and Germany in terms of qualifications held lay not in the quality or standard of the awards in the two countries but in the far greater numbers gaining vocational qualifications in Germany compared to Britain. Britain was not found to suffer any grave deficiency in university graduates - except, perhaps, in engineering. The striking deficiency was in those qualified to the vital skilled craft, technician and junior professional skill levels (commonly known as Level 3 - NVQ3, GNVQ3 and A-level). A recent comparison shows Britain having only a quarter of the population of working age holding qualifications at this level, compared to nearly half in Sweden and two thirds in Germany.

Academic qualifications have grown fastest

Since the late 1980s, hopes had been growing that the rapid expansion in numbers enrolling in post-16 year old education would help to enlarge Britain's stock of

Level 3 craft, technical and supervisory skills. However, analysis of Labour Force Survey data for the period 1991 to 1996 carried out at the Centre for Economic Performance (CEP) shows that almost all the growth in the stock of qualifications held by 19-21 year olds at Level 3 and above can be accounted for by growth in academic qualifications (A-level and degrees). An amazing thirteen per cent more individuals held academic qualifications (Level 3 and above) in 1996 than in 1991. On the same measure, all vocational qualifications (defined as HNC/HND, (G) NVQ2,(G) NVQ3 and vocational equivalents) grew by just over one per cent.

Lack of incentive to gain NVQ in preference to academic qualifications

When young people invest in post-16 education and training, they make decisions based in part on what they can ascertain about the value employers place on qualifications. The one consistent message of the last decade has been that a degree pays. As a result this is the route to which a majority of those enrolling at 16+ aspire. Based on wage differentials, messages about the value placed by employers on NVQs gained through college study have been mainly negative.

NVQ assessment model a fundamental problem

FE colleges and school sixth forms have done a fine job in raising the average level of achievement of around half of 17 and 18 year olds. But they have been unable to deliver at the more specialised vocational level, in particular NVQ Level 3. One reason has been the narrowness of these qualifications which have failed to provide the foundation needed to progress to higher education. This has made the qualifications unattractive to ambitious youngsters. A second reason has been the competence-based nature of the NVQ and its outcome-based assessment designed to be carried out in the workplace. This model has not adapted well to use in full-time education and gives little guarantee of standards. Perhaps in part because of this problem, the labour market has failed to send positive signals to young people with vocational qualifications in terms of either recruitment or pay differentials.

The effects of skill shortages on the economy

In the short-term, skill shortages lead to a rekindling of inflationary pressures and consequently to deflationary measures and a premature end to economic recovery. Thus, shortages of skills in sectors such as IT and construction pushed up wage inflation during the recovery of 1994-1998 in a striking rerun of the experience of 1986-1990. The result has been lost employment and output, to the detriment of both the unemployed and the wider economy.

Productivity suffers when skills are in short supply

In the longer term, the adverse effect of skill shortages upon productivity growth in British industry has been demonstrated. During the 1980s, sectors affected

included the engineering group of industries, whose reliance on apprenticeship has historically been considerable. Similarly, a range of research into comparative productivity and trade patterns in Britain and foreign countries, including both case-studies at plant level and statistical studies of inter-sectoral differences, has pointed to a deficient supply of intermediate vocational qualifications as a leading cause of what is still a relatively poor productivity record in most sectors of British industry.

Intermediate qualifications remain the key

Such research points to the economic importance of intermediate vocational qualifications, to whose supply apprenticeship contributes. As such qualifications can also be produced through full-time vocational education, as has largely been the case in France and Sweden, an expansion of apprenticeship is not necessarily the solution to such problems. Moreover, the favourable productivity and trade performance of the post-war US economy does not depend on apprenticeship, which declined at a much earlier date in the US than in the UK.

Why Britain is different

It has therefore been suggested that, as a result of higher participation rates (just over half of all 16-19 year olds in full-time education and one third proceeding to higher education) Britain has already gone down a state-based full-time route to vocational education. Further, it could be argued that this route offers the prospect of more equal access, better long-term co-ordination, and broader training in numeracy, languages and computing skills. However, an argument that Britain should go further down this route is ill-conceived for a number of reasons. First, there is a sizeable proportion of the youth cohort who do not wish to follow the classroom route. Such individuals need to be trained in those intermediate skills which are essential for a successful modern economy. Second, full-time education post-16 produces mainly academic qualifications. Third, completion rates are a cause for concern - for example, over a third of those who enrol in full-time education in the Further Education sector fail to complete successfully. We conclude that the full-time route in British schools and colleges and universities has insufficient resources to provide adequately for the whole range of Britain's vocational and professional training needs. Nor can this route easily provide the practical experience necessary for their acquisition. Finally, such an approach removes responsibility for the supply of skills too far from employers and the workplace. We point out in Section 2 (below) that Britain has a long and mainly honourable tradition of apprenticeship training which, in certain sectors, is held in high esteem by trainees and employers alike. It is to this tradition, now renewed by the Modern Apprenticeship initiative, that we consider Britain should turn to finally overcome the intermediate skills deficit. In the second part of this section we set out the educational case for supporting and expanding apprenticeship in Britain.

1.2 The educational case for apprenticeship

What we mean by apprenticeship

In apprenticeship, skills and knowledge are acquired through a combination of structured learning opportunities in the workplace, participation in the production

process and formal 'classroom' learning. Below (Box 1), we provide our own definition of apprenticeship. This definition is designed to include all the elements that we consider necessary to underpin future expansion. In subsequent sections of this report we put the case for basing apprenticeship on a model which includes these elements, in particular, high-quality off-the-job learning, a special contractual status for apprentices and a trainee wage which reflects the value of the training provided.

Box 1 about here

Text of Box 1 [**Definition of Apprenticeship** Apprenticeship is defined as a contract between an employer and a young person combining on-the-job training, formal learning and productive work. Once entered into, the agreement places upon both employer and the young person a set of reciprocal rights and duties. The employer agrees to ensure that the apprentice follows the stipulated programme of vocational education and training which will be based on national standards formally recognised by the sector concerned. A non-negotiable part of the agreement will be that on-the-job training will be complemented by off-the-job training in an educational institution. In return, the apprentice agrees to conscientiously pursue the stipulated programme of education and training, to undertake productive work related to his/her course of training within the company and to accept a training wage appropriate for the his/her age and the stage of his/her apprenticeship training.]

Apprenticeship helps develop the 'learning workplace'

By apprenticeship, we understand a model of learning in which the apprentice acquires the skills and knowledge required of the skilled worker, technician or professional practitioner. This model works as successfully for highly-qualified professionals - chartered accountants and doctors - as it does for the more usual range of intermediate level occupations - from business administrators to qualified electricians. Good apprenticeship has the potential to meet young people's aspirations for relevant and flexible education and training post-16. It also delivers the wider range of skills so urgently needed by business. Equally important, the training experience and expertise developed by firms which offer apprenticeships helps firms to develop as 'learning workplaces'. These developments benefit all employees because of the wider opportunities that a 'learning workplace' can offer for upgrading and development.

Is apprenticeship still relevant to the needs of the economy?

The long tradition of apprenticeship in Britain is at once a strength and a weakness. Where quality training has been maintained, the status of apprentice is attractive to young people and their parents, free from the stigma which Youth Training type schemes acquired. Yet, at the same time, those who look to the past history of apprenticeship - largely confined to young males in the manufacturing sector - argue that it has little relevance to today's economy and that its mobility of training has been poor.

Apprenticeship more relevant than ever

We argue that, far from being outmoded, the apprenticeship model is particularly appropriate for an increasingly global, flexible economy. A wide range of personal and social skills - team-working, the ability to solve problems, the confidence to work autonomously and creatively - are increasingly valued and required in most workplaces. A partnership between firms and education/training establishments is recognised in many countries as the optimal and most cost-effective way to develop this range of skills. The role models and real-life problems and challenges found in the workplace make it the most efficient learning environment for acquiring personal and social skills. Specific technical and professional skills can also be acquired in the workplace using a wider and more up to date range of equipment than can normally be provided in colleges. But, at the same time, the level of technical knowledge and general competence in communication and numeracy required of employees is rising. Here, the partnership with education is vital. The college has an important role to play in apprenticeship through the development of complementary technical knowledge and understanding, and underpinning general education.

Apprenticeship can offer opportunities to <u>all</u> young people

The example of other countries, notably the German-speaking countries, has also demonstrated the extent to which apprenticeship can accommodate within a single framework young people of widely differing academic ability and professional aptitudes. Different professions require different qualities in young people. There is scope within the apprenticeship framework for young people who offer commitment, loyalty and perseverance as well as for the academic high-flier. Apprentices see their growing skill recognised in the work-place and this recognition provides an invaluable sense of self-worth and professional identity. For these reasons, apprenticeship offers the possibility of a less status-conscious and less divisive route to technical and even professional qualification than is currently on offer in the school/college system.

Workplace rather than classroom-based learning more effective for some young people

The simultaneous combination of part-time education with workplace training which characterises apprenticeship can claim educational and economic advantages over the strictly sequential approach involved in full-time vocational education. The opportunity to learn while in the workplace offered by well-planned apprenticeships can both motivate young people to learn more and help improve the quality of what they learn. Young people who are unhappy with full-time schooling are often attracted by learning related to 'real work' and marketable outputs, and more willing to concentrate on formal learning when it is

conducted part-time and relevant to their chosen skill area. Moreover, some of the talented young people who drop out early from full-time post-16 courses may fare better if the schooling in question is tied to work-based learning and conducted on a part-time basis. To help overcome this problem of lack of contact with the reality of the workplace, some full-time GNVQ and NVQ courses now try to offer work experience placements. But such changes, welcome as they are, cannot approach the structured integration of work-based with classroom-based learning that apprenticeship entails.

Labour-market advantages of apprenticeship for young people

Young people drawn into any expansion of apprenticeship can expect to benefit personally. Statistical evidence from a range of countries suggests that apprenticeship has a much more favourable effect on subsequent labour market fortunes, in terms of both access to employment and rates of pay, than does the informal job training which in Britain expanded at the expense of apprenticeship. The evidence becomes less clear-cut when apprenticeship is compared to full-time vocational education, but even here, evidence for Britain at least, suggests a clear advantage in favour of apprenticeships which lead to a recognised Level 3 qualification. Moreover, although vocational qualifications have been found to generate lower earnings than general qualifications such as GCSEs and A-levels, a striking exception is provided by some occupations, including engineering crafts, where earnings are higher for ex-apprentices than for those with formally 'equivalent' general qualifications.

Equal opportunities still a problem in apprenticeship

In Britain, young women have not only enjoyed lower access to apprenticeship than have young men, but they appear also to have lost ground relative to other young women when they have done so. In part, these unattractive features reflect the deep-rooted occupational segregation of work by gender to be found in all economies. In part, they also reflect the traditional restriction of female apprenticeship to a limited range of overcrowded and low paid occupations. However, recent German experience gives cause for optimism: although in that country occupational segregation remains marked, the access of females to apprenticeship has increased vastly in the past two decades and the contribution of apprenticeship to subsequent pay and employment prospects appears to be as favourable for females as for males. By contrast, in Britain, it must be conceded that equal opportunities objectives do not seem to have been met with only 4 per cent of Modern Apprentices coming from ethnic minorities and with 43 per cent being female and mainly concentrated in traditional female jobs.

Modern Apprenticeship - a viable basis for progress

Section 2 below makes clear that the British government and some sectors of British business have, albeit belatedly, produced a workable and far-sighted design to rescue and modernise apprenticeship in the form of Modern Apprenticeship. The new framework produced is, in our view, a viable foundation for rebuilding and expanding the work-based method of skill formation. Our concern is that progress in building on this foundation is slow, and that fundamental structural problems of an inadequate supply of places and the changing aspirations of young people have yet to be addressed.

For all its potential, apprenticeship is not presented here as a quick or easy solution to Britain's skill and training problems at either national or individual level. Expanding apprenticeship requires finding solutions to a whole range of problems. In addition to problems of access (including enduring gender-related bias) and of cost-sharing, there is the problem of institutional viability. This relates to the need to create and sustain a pattern of finance and incentives which balances the supply of and demand for places at a level sufficient to meet national requirements. Finally, there is the need, currently not sufficiently well addressed, to disseminate much fuller information about apprenticeship to young people and their parents. In Section 2 we assess the extent to which Modern Apprenticeship has resolved the fundamental issues raised by an employer/trainee/education partnership. Issues of finance and incentives are explored in greater depth in Section 4.

SECTION 2 REINVENTING APPRENTICESHIP - MODERN APPRENTICESHIP REVIEWED

A mixed past: apprenticeship in Britain pre-1960

Up to the early 1960s, apprenticeship provided the British economy with an adequate supply of skilled labour of a reasonable, though variable, quality. In contrast to Germany, however, it did not extend much beyond traditional occupations. As it developed in Britain, apprenticeship had the following broad characteristics. It was usually based on a formal or informal agreement and lasted for between three and five years. During the interwar and post-war period apprentices were often used as cheap labour, but the tradition largely prevailed that apprenticeship should provide training in broad occupational skills. A key feature was the alternation of work and on-the-job training with off-the-job training in technical colleges. Allied to this, apprentices increasingly acquired qualifications, in particular City and Guilds (C&G) or Business and Technology Education Council (BTEC) certificates. Regulation through collective bargaining was either by informal custom and practice at workplace level or by more formal agreements at industry level.

A missed opportunity: failure to reform 1960-1990

From the early 1960s, there were growing criticisms of apprenticeship training by employers and policy makers. The main charges were that it was exclusive in that entry was restricted to young males in certain trades; it involved a large amount of time-serving rather than training to standards; and it perpetuated outdated restrictions and demarcations. In these circumstances, reforms were attempted by governments, employers, and unions. The 1964 Industrial Training

Act, and the related Industrial Training Board (ITB) and levy-grant system, supported apprenticeship training by seeking to spread the costs more equitably between employers. Some ITBs also played an active, reforming role by promoting off-the-job provision and introducing training to standards. Though reforms were implemented through the 1970s and 1980s, progress was uneven between and within industries. Moreover, there was little success in extending apprenticeships to non-traditional occupations. In retrospect, an opportunity was missed, and the British system of apprenticeship was not fundamentally reformed in the way it was in Germany at that period.

The beginnings of government schemes

By the 1980s apprenticeship training was being overtaken by major changes. In the context of rising youth unemployment, governments introduced a series of 'schemes' to provide youth training. From the early 1980s, under the Youth Training Scheme (YTS later renamed Youth Training -YT), young people received a government allowance, but often did not have employed status. On the one hand, YTS and YT spread formal training to many who would never have done an apprenticeship. On the other hand, the scheme was primarily intended to alleviate youth unemployment, and the level of much of the training was of a low standard. As a result, state-based schemes acquired a bad reputation with both young people and employers. Some firms which traditionally had apprenticeship programmes replaced these with cheaper YT trainees; others used YT as a screening device and later upgraded selected trainees to apprenticeship status. By the early 1990s, around two thirds of a greatly reduced number of first-year apprentices were on YT. Simultaneously, therefore, YT both supported apprenticeships by providing subsidies and undermined them by providing a state-based alternative.

The introduction of Modern Apprenticeship in 1993

Over a long period numbers in apprenticeships declined. The most precipitous falls in apprentice ratios were in the late 1960s and early 1970s, in the early and mid-1980s, and again most dramatically in the early and mid-1990s. The Youth Cohort Survey shows that the proportion of 16-18 year olds in apprenticeship fell between 1989 and 1992 from 14 to 9 per cent. Successive Conservative administrations after 1979 distrusted apprenticeship training and removed supports such as the ITB system. Reports published by the Central Policy Review Staff in 1980 and the Manpower Services Commission in 1981 stressed the negative aspects of apprenticeship - the perceived association with craft unions and restrictive labour practices. It was therefore a dramatic reversal of policy when, in 1993, the Conservative government announced the launch of Modern Apprenticeship. This reversal reflected a growing awareness that earlier policies were mistaken or inadequate and that there existed a significant skills gap at the intermediate level.

The status of the Modern Apprentice

Modern Apprenticeship incorporates both traditional and novel features. In line with traditional apprenticeships, there is a written agreement between the employer and apprentice, specifying rights and obligations. This also outlines the training to be provided, qualifications to be attained, and a commitment to completion. As such the agreement is intended to signify a mutual pledge to a significant period of training. The agreement is underwritten by the local Training and Enterprise Council (TEC), with the expectation that, should the employer cease trading, alternative training will be found. A corollary of this sort of agreement is that the young person is recognised as being employed as an apprentice and is paid a wage by the employer. This is seen as a way of signalling employer commitment and as a means of attracting young people.

Links to sector frameworks

Each Modern Apprenticeship is linked to a sector framework based on training to NVQ level 3. Though no time period is specified, the expectation is that the average apprenticeship will last about three years. Training for technician and associate professional (NVQ Level 4) skills is also encouraged in some sectors, building on previous trends in engineering and some other sectors.

Keys skills compulsory in Modern Apprenticeship

In addition to the NVQ, there is a requirement that the apprentice be taught 'key' skills (numeracy, communication, IT, problem solving, and personal skills such as teamworking). These are intended to provide a broader educational base. However, in practice, there is great variety in how these are delivered and whether they are certificated. There is also concern among employers with the size and funding of this component.

Flexibility and transferability also a goal of Modern Apprenticeship

Modern Apprenticeship is intended to provide preparation in broad skills capable of being transferred in occupational labour markets. In contrast to traditional apprenticeship, it is also intended to provide a broad educational base and the possibility of movement between routes. This flexibility fits with the notion of alternative, but inter-linking, pathways within the British system. We would argue, however, that a further strengthening of this aspect of Modern Apprenticeship content is required in order to ensure easier progression through to higher education for those who want it. This will necessitate a strengthening of the education content of apprenticeship relative to the unambitious 'key skills' requirements to which it is limited at present.

Modern Apprentices are older

A significant aspect of Modern Apprenticeship is that some 60 per cent of Modern Apprentices are aged 18 or over. This reflects employers' determination to recruit young people with a sufficiently high standard of education. Currently, government funding criteria are restricting proportions of 18 year olds who can be recruited and depressing the number of starts overall. We consider that the trend towards taking on apprentices at a later and more mature age should be encouraged if this is the way in which increased demand for and supply of places can be secured.

Employer 'ownership' a priority

From its beginnings, a basic feature of the scheme was to give 'ownership' to industry, which, in reality, as with previous Conservative reforms, meant giving leadership and control to employers. This was seen as necessary to establish employer commitment and to avoid the appearance that this was yet another government scheme for the unemployed. Thus, employer-led Industry Training Organisations (ITOs now National Training Organisations - NTOs) designed the frameworks and employer-led TECs currently organise delivery at the local level. Vocational education colleges, traditional certifying bodies, and trade unions have played a lesser role. A crucial part of Modern Apprenticeship is that the whole of the wage and part of the training costs are borne by the employer. However, government also contributes towards the cost of off-the-job training and this has established for the first time in Britain the principle of state support for part-time education and training for employed young people (see also Section 4 below).

The role of TECs - funding and regulation of Modern Apprenticeship varies widely

In practice, the DfEE sets total target numbers for Modern Apprenticeships. However, TECs in turn decide how much they will spend and which types of apprenticeships should be offered. TECs thus have some latitude as to whether, for example, they seek to fund more engineering and IT places which may be more costly and difficult to find, or more hairdressing and retailing apprenticeships which may be cheaper and easier to find. This means that an individual employer seeking to take on an apprentice may find that his/her local TEC is unwilling to allow the employer to participate in the Modern Apprenticeship scheme. The funding regime under which TECs operate is also problematic. There is wide variation between TECs in the amount of funding available for apprenticeships in the same sector. Funding for off-the-job training is output-related and trainers receive payment on attainment of competency by trainees. As trainers are often assessors as well, this creates an incentive to permit sub-standard candidates to progress.

The sector coverage of Modern Apprenticeship

By 1998, over 70 sectors (covering the majority of British industry and commerce) have developed Modern Apprenticeship programmes. Some programmes, such as engineering and electrical installation, build on well established arrangements; others, such as IT, retailing, and business administration, had a bigger challenge to develop frameworks from scratch, from existing loose qualifications, or from YT arrangements. In this respect, the programme has extended apprenticeships to new sectors on the lines of the more broad-ranging German system. In terms of recruitment, there was some initial fear that young people would be insufficiently interested because of the stigma of government schemes and a growing preference for the school-based route. In practice, while some employers

still complain of a shortage of suitable candidates, in most cases it has been relatively easy to recruit and the average level of educational attainment of the early intake has been high - including many who might have stayed on at school or gone to university (see also Section 3 below).

Despite favourable employer and apprentice reaction, Modern Apprenticeship has fallen short of target numbers

The overwhelming conclusion from surveys has been that most participating employers and most apprentices are very satisfied with the scheme. However, it is necessary to go beyond these largely optimistic survey results and to consider outcomes in more detail. When the Modern Apprenticeship was launched, it was envisaged that around 70,000 would qualify annually and that there would be between 150,000 and 200,000 Modern Apprentices at any one time. We consider that these initial targets were not sufficiently ambitious, but setting aside this question for the moment, we can see from current figures that Modern Apprenticeship has fallen short of its (modest) initial targets.

Modern Apprenticeship starts insufficient to fuel expansion of apprenticeship

Between the launch of Modern Apprenticeship in 1993 and October 1998, the cumulative total of Modern Apprentice starts in England and Wales has been around 190,000. In August 1998 a total of 117,000 young people were in apprenticeship programmes. Starts over the period September 1997- end August 1998 were just over 70,000. The flow is therefore still somewhat below target figures, though growing. On this basis and given a drop-out rate of around 20 per cent, it will take until beyond the turn of the century before the target of 200,000 Modern Apprentices in training in any given year is reached. Moreover, the beginning of the Modern Apprenticeship has not arrested the fall in apprentice numbers. Overall, by the turn of the century, apprentices (Modern and otherwise) will probably constitute only around 10 per cent of the 16-18 cohort, in effect little or no increase over the 1992-93 level.

Sector breakdown of Modern Apprenticeship places

One of the reasons why we consider that Modern Apprenticeship places could be greatly expanded is the very great variability between sectors in Modern Apprentice starts. For example, in electrical contracting there was one apprentice start for every 85 employees in 1998. In the travel sector there was one start for every 67 employees. Yet in health and social care the corresponding figure was one for every 400 employees, in the chemical industry one for every 2000, in banking one for every 12,000 and in cleaning services one for every 64,000. We explain below (Section 3) why apprenticeship is highly valued in electrical contracting and the travel industry. We also suggest, in our policy recommendations that the features of these sectors which are conducive to the development of training could and should be developed in other sectors.

Some substitution effects in Modern Apprenticeship

Some companies have used the Modern Apprenticeship to re-enter apprenticeship training; others have used it to introduce apprenticeship for the first time. However, many firms have merely substituted Modern Apprentices for apprentice places they would have funded themselves anyway or which would have been supported in the first two years by YT. In engineering, for example, leading firms such as Rolls Royce, British Aerospace, Rover, and Ford had apprentice schemes and simply renamed as many as they could on such programmes as Modern Apprentices. Similarly, in construction, many employers who funded the first two years of training under YT have now switched to the Modern Apprenticeship. However, as long as employers in these companies and sectors have also expanded apprentice training we should, perhaps, not be too concerned about substitution.

Modern Apprenticeship leads to recognised qualification outcomes

Turning to qualitative outcomes, the introduction of Modern Apprenticeship, with associated NVQs and key skills, has given some industries an opportunity to re-think the content of youth training. In some sectors, this meant building on firm foundations. For example, in chemicals, training to standards and multi-skilling had been introduced in the 1980s. By contrast, in other sectors, wholly new arrangements have been created or there has been an upgrading of existing arrangements along with the move to Modern Apprenticeship. The emphasis on national systems and more standardised content may have led to greater transparency and transferability. In this respect, Modern Apprenticeship is better than informal on-the-job upgrading which is uncertified and difficult to transfer. It is also an improvement on some traditional apprenticeships where levels and outcomes could vary considerably - though Modern Apprenticeship may also allow too much variation. The new apprenticeship may also be positive in that it provides a stepping stone and basis for further training. For example, it is being used in this way in retailing where some large supermarkets are using it for progression to management positions. At Rover, Modern Apprenticeship offers the possibility of switching between craft and technician schemes in a way which was more difficult under traditional apprenticeships. Modern Apprentices at Rover are also encouraged to continue in apprenticeship while gaining a higher education qualification.

NVQs and lack of experienced trainers a problem

Still in terms of qualitative outcomes, criticisms may be levelled at the quality of training, related primarily to the NVQ framework, the quality of trainers and assessors, and the funding system. First, it has been claimed that the NVQ approach stresses the ability to perform a set of tasks at a given point in time rather than a fuller understanding of the context of the trade and its broader theoretical underpinnings. Second, it has also been argued that national competency frameworks cannot take account of the variability of contexts in which tasks are performed, except by becoming increasingly abstract and complex. This in turn makes the framework less and less intelligible to employers who then lose confidence. Third, there are problems in terms of tuition and assessment and therefore of quality assurance with the present system. In most British firms there does not exist the class of experienced trainers who, for example, are a key part of the

German system. Fourth, testing relies extensively on the assessment of practical work, carried out often by internal assessors, though subject to having been certified to standards set by the NTO concerned. Such assessors, however, may not be well qualified to assess 'key' skills and, moreover, may be inclined to push their own trainees through. This may then result in outcomes varying from company to company. As a consequence, the consistency and transparency problems of the old system may persist.

Improvements to the Modern Apprenticeship framework are being introduced by government and employers

Given these criticisms, some changes and adaptations have already been made by government and employers. Attempts have also been made to simplify and improve assessment of NVQs and 'key' skills with more rigorous external testing. Faced with deficiencies in content, firms have also adapted the frameworks in various ways to make them more relevant and also sometimes more demanding. Thus, for example, Ford requires a broader content to ensure standards and multi-skilling (unlike most firms, it has also retained a 4-year time-based format and also guarantees a job on completion). A number of sectors, such as engineering, chemicals, and bus maintenance, have maintained a traditional qualification alongside NVQs to ensure that knowledge and understanding are sufficiently wide. In electrical contracting, the industry has insisted on the continuation of its traditional qualification and its own testing standards. In other cases, adaptations may be less benign and may result in downward variability and reduced transparency.

SECTION 3 MODERN APPRENTICESHIP IN COMPARATIVE PERSPECTIVE

Britain compared to Germany

Modern Apprenticeship has gone some way to remove some of the weaknesses of traditional apprenticeship. In this report we try to answer the following questions. To what extent do we already have in place in Britain the characteristics and underpinning institutional features that have been widely identified as contributing to the success of apprenticeship in Germany? Where institutional arrangements for Modern Apprenticeship differ from arrangements in Germany, can alternatives be found to underpin a self-sustaining apprenticeship system?

Long tradition of apprenticeship in Germany

Much has been written emphasising the long and strong tradition of apprenticeship in Germany and its current high status among young people. Apprenticeship in Britain also has a long history but in the late 19th and early 20th century Britain failed to capitalise on that tradition in the way that Germany did. Later, Britain failed to extend and modernise apprenticeship so that the two countries now diverge considerably in the strength of institutions underpinning apprenticeship and in the status of apprenticeship among young people. Nevertheless, we argue that Modern Apprenticeship takes Britain several steps nearer the German model with respect to the range of apprenticeships offered, prior qualifications of apprentices and training content. Although institutional underpinning of apprenticeship is

the greatest weakness in Britain, we point to two sectors where institutions and social partnerships work well in Britain as evidence that this weakness can be remedied where sufficient incentive exists. But we recognise that young people will not be attracted to apprenticeship until it provides educational opportunities of a quality similar to those offered in full-time education.

Qualifications of entrants to apprenticeship in Britain and Germany

In contrast to YT, Modern Apprenticeship draws upon a cross-section of young people having similar school attainments to those in apprenticeship in Germany. Around 15 per cent of all German apprentices hold a qualification equivalent to A-level while in England the figure is 11 per cent. Forty five per cent of German apprentices have the equivalent of GCSE Grades A-C - in England the percentage is similar - just under 40 per cent. This in turn means that, in one respect at least, Modern Apprenticeship can aspire to a similar status to apprenticeship in Germany - inclusive of individuals from a wide ability range rather than suffering from the low status of YT.

Most frequently chosen sectors/occupations in Britain and Germany

The most frequently chosen apprenticeship sectors are also remarkably similar and encompass both manufacturing and service sectors in both countries. In both countries, business administration, motor industry occupations and retail sales are among the top five chosen. This clearly demonstrates the extent to which Modern Apprenticeship has moved away from the occupations and sectors that dominated traditional apprenticeship and now embraces a wide range of sectors.

The importance of high training standards for the status of apprenticeship

A fundamental feature of the German apprenticeship is that the content of the training provided by the firm is determined by firms within the sector and is designed to produce skilled workers who can work to the standards required by the sector. Because collective agreements in Germany actually commit firms to paying workers who have successfully completed a recognised apprenticeship more than untrained workers, firms must ensure that the training programme for apprentices adds value and increases the marginal product of the skilled worker relative to the unskilled. Modern Apprenticeship is similar in that the training standards are produced by sector level organisations. It is, however, vital to ensure that Modern Apprenticeship standards are such that apprentices who reach those standards 'add value' to the organisation.

Germany also specifies technical knowledge and competence

Modern Apprenticeship specifies a general component of 'key skills' in addition to occupational competences. However, these are restricted in range and level when compared to the equivalent German programmes of study. Nevertheless, the Modern Apprenticeship recognises the need for key skill development and it is to be hoped that standards will rise as firms recognise their importance. But a point of contrast with the German apprenticeship is that there is no specification in Modern Apprenticeship of a body of technical knowledge specific to the occupational/sectoral area which must be mastered. A number of sectors (engineering, electrical contracting) specify such technical knowledge, others do not.

The supply of apprenticeships - the contrast between Britain and Germany

A fundamental weakness which has undermined attempts to relaunch apprenticeship in Britain has been a low level of demand from employers for apprentices. We can appreciate this by a simple statistical comparison. Apprentice starts in Germany in 1997 represented around two thirds of a notional cohort of 18 year olds. In England, the corresponding figure for Modern Apprenticeship in 1997 was just over ten per cent. The contrast is all the more striking when we reflect on two additional points of contrast between the two countries. First, in England the government makes a contribution to firms' apprentice training costs while in Germany there is no direct government contribution to firms that train apprentices. Second, until recently when Germany hit the bottom of the economic cycle, the number of training places offered by firms in Germany outstripped the number of young people requesting training places. Even during the recent period of economic downturn, apprentice places offered have fallen only slightly short of apprentice places sought by young people. We attribute this in no small measure to lower apprentice wage rates in Germany - normally around one third of the adult skilled wage.

The contractual status of the apprentice

One way of equitably setting apprentice pay at a level which reduces employer costs to a more realistic level would be to introduce a special contractual status for apprentices. The position of the apprentice in labour law is potentially distinct from those of both the trainee and the employee. The more important distinction concerns trainee status. Participants in the Youth Training Scheme in the 1980s were denied the legal rights associated with employee status, notably employment protection and (initially) health and safety protection - unless a sponsoring employer offered 'employee status'. The marginal and insecure nature of such contracts created concern and disrespect, and a determination that Modern Apprentices should enjoy employee status. The second distinction, between employee and apprentice, has been largely overlooked in this aversion to trainee status. The distinction had already become marginal. Contracts of apprenticeship and service had become ever closer within a wider 'employment' category; the principal distinction between the two concerned the fixed-term nature of the apprenticeship contract and the employer's freedom to discharge an apprentice after completion. In Germany, by contrast, the status of the apprentice has remained systematically segregated from that of the employee. This differentiation has in turn permitted the payment to German apprentices of training allowances pitched at lower levels than apprentice wages in Britain and the maintenance of a more effective system of finance and incentives in German than in British apprenticeship. The scope for, and merits of, institutionally differentiating the three types of contract remains an issue for contemporary apprenticeship in Britain.

Setting standards and maintaining demand for skills in England and Germany

Most commentators emphasise the points of contrast between apprenticeship training in England and Germany and these are indeed striking, as we have indicated above. Yet, examples exist, in England, both in manufacturing and services, of apprenticeship schemes underpinned by solid industry commitment to training which reflects the more widespread German commitment. Before moving on to issues and policy recommendations, it seems important to analyse the underlying incentive structure which produces these apprenticeship schemes in Britain.

The example of Electrical Contracting in England and Wales

The example of the electrical contracting industry in England and Wales indicates that joint industry agreement and management of high quality apprentices' training can be established and flourish in this country. This is achieved by a combination of statutory regulation in the interests of public safety and the use of training by firms to ensure work to required standards. [**The Case of Electrical Contracting** While electrical contracting firms are not obliged by law to employ electricians with Approved Electrician status, the Electricity at Work regulations means that they are obliged to work to technical standards laid down by the Institute of Electrical Engineers (British Standard 7671:1992). It is therefore in firms' interests to employ electricians trained to understand and work to those standards. Further encouragement to employ trained employees stems from membership of the Electrical Contractors Association. The Association guarantees the quality of its members' work, and much of its work is concerned to promote training to recognised standards. The better trained its members the lower the collective liability for bad work] [To box. Title in bold].

Box 2 here

The example of the travel industry in England and Wales

This principle also underpins training in a very different sector in England and Wales, the travel industry. Travel agents are obliged by law to take out insurance to protect their customers in cases where the agency has to cease trading. Normally, travel agents belong to an association - ABTA is the most well-known - which collectively provides insurance to protect customers against loss resulting from business collapse. While ABTA membership does not impose a training requirement *per se* - it is in the interests of all its members to minimise the costs of the insurance they are obliged by law to take out. An obvious way to reduce the possibility of poor practice in the industry is to ensure that staff are trained to high standards. The incentive to minimise the cost to business of insurance policies acts as an incentive to use apprenticeship to develop the skills needed by the industry. Here is how a former Director of the Travel Training Company explained the industry's acceptance of the need for training.

[**The Case of the Travel Industry** 'The industry has throughout its short life been much wedded to the concept of standards, and nationally uniform standards at that - partly reflecting some of the early financial collapses which threatened to black the sector's name in general. The

wide range of 'products' (mainly packages or modules for the leisure sector); the immediacy of the relationship with the customer (who if dissatisfied usually has no difficulty in tracking back to the hapless individual agency employee); the close working relationship between superior/manager and clerk/consultant in the typically small agency (whether independent or part of a chain); the fact that complaints, errors or poor service may be all too audible and visible in such a context: all of these have helped industry acceptance of the need for soundly-based training, not least in the product range.'] [To box. Title in bold]

Box 3 here

Lessons from these sectors

The two sectors cited here, electrical contracting and travel services, demonstrate that in individual sectors, acceptance of quality standards can lead to commitment to high quality training. This training is in many ways similar to practice in Germany. In our conclusions and policy recommendations we suggest how the incentives to train which operate in these sectors might be extended to a greater number of sectors and thereby stimulate the demand from employers for Modern Apprenticeships.

SECTION 4 ISSUES AND PROBLEMS

4.1 Finance and Incentives to Invest in Apprenticeship

The cost of apprenticeship

The financial attributes of apprenticeship are both complex and important for its viability. In the first place, apprenticeship is costly. Estimates of direct and indirect costs range from £8,000 to £30,000 over a three year apprenticeship according to sector. In theory, these costs can fall to any or all of the three parties - employer, apprentice and taxpayer - who potentially benefit from apprenticeship.

Cost-sharing must be fair and effective in promoting apprenticeship

Those who benefit from training should contribute correspondingly, for reasons of both fairness and efficiency. The case on efficiency grounds is a matter of incentives: when a party's investment in apprenticeship leads to a commensurate reward, a suitable incentive to undertake training is present. If cost-sharing reflects benefit-sharing then the outcome will be a sufficient supply of places and a corresponding demand from young people.

Society also benefits and should share part of the cost

As the benefits of apprenticeship are shared amongst the relevant parties, so the costs should also be shared. The apprentice can expect to gain, in terms of expected future earnings. The sponsoring employer gains a larger subsequent supply of skilled labour, according to the willingness of the apprentice to stay

after training. Other employers also gain, to the extent that ex-apprentices leave to join them. The taxpayer and the wider economy also gain, to the extent that a greater supply of skilled labour increases productivity (in ways that are not captured by the parties directly involved, e.g., through more rapid innovation leading to lower product prices), as well as through the development of a more educated and knowledgeable society.

The key issues of cost-sharing

Although it is difficult to measure the costs and benefits of apprenticeship to the various parties, and thus to fine-tune the system of finance and incentives, broadly viable patterns and gross misalignments can nevertheless be identified. The key issues are: the division of costs between the taxpayer and private parties; within the latter category, between apprentices and employers; and within the employer category between the employer who sponsors apprentices and the employer who recruits ex-apprentices.

The role of public funding

Taking these issues in turn, the first point is that a major public contribution to the costs of apprenticeship is warranted. The use of public funds to subsidise most full-time education is usually justified in terms of the wider social and economic benefits of a more educated society. To the extent that apprenticeship contributes to national educational objectives - as we argue that it should and does - or improves national economic performance, public funding of a part of apprenticeship costs is also justified. These contributions are typically recognised in continental apprenticeship systems, including those of Germany and its smaller neighbours, by public funding of the institutional costs of the part-time vocational education courses that are built into apprenticeship programmes. In other words, college-based courses are provided free of charge to employers for recognised apprenticeships. If the public benefits of apprenticeship are judged greater still, then government should contribute to the costs of the work-based training as well. Although such support is not provided by government in Germany, in France employers receive a subsidy of between £2,000 and £4,000 for a two year apprenticeship.

Modern Apprenticeship establishes the principle of government support

The UK has in the past suffered from inadequate public financial support for apprenticeship. The traditional view of apprenticeship as another form of job training was associated with the view that 'industry should pay'. In the early 1980s employers were required to pay tuition fees for the part-time courses taken by their apprentices at further education colleges. Until the 1990s, public subsidies to employers for sponsoring apprenticeship had been adopted only as short-lived emergency responses to the collapse in the supply of places that occurred in the slumps of 1974 and 1979. The issue of public support has been addressed only in this decade, with the introduction of the Modern Apprenticeship scheme. From the evidence of the relatively slow expansion of numbers

on the Modern Apprenticeship since 1993 however, we are not convinced that current government funding of Modern Apprenticeship is sufficient to sustain the expansion that we call for in our policy recommendations.

Both cost-sharing and incentives are important

The employer who sponsors an apprentice can expect to gain from his or her subsequent services as a skilled employee; the apprentice can expect to achieve higher pay and employment security. Economic analysis - and common sense - suggest that both parties can therefore be expected to bear a commensurate share of the costs and still participate in the training - and that the higher their expected benefits, the higher the costs that will be willingly incurred by each party. Conversely, the higher the costs, the greater must be the anticipated benefits. Problems arise when the anticipated benefits to either party become small and uncertain and when costs remain high and certain. A young person may not accept a place when more skilled work offers few advantages over less skilled work. Similarly, the employer may not offer a place when costs are disproportionately large relative to benefits.

Problems of incentives have hampered training in Britain

Both problems have hampered apprenticeship in Britain. During the 1970s pay levels of semi-skilled production workers approached and even outstripped those of their more skilled ex-apprentice colleagues. Moreover, redundancies were widespread amongst skilled workers, and fears of job insecurity in sectors such as manufacturing and construction were high. Under such circumstances many young people - particularly the more able ones with better prospects elsewhere - avoided apprenticeship.

Rising costs for employers in the post-war period

The more fundamental problem however was the decreasing willingness of employers to provide places. Financial factors played a major part. The pay of apprentices roughly doubled, relative to that of other employees, during the period 1930-70, shifting training costs steadily towards employers. The Industrial Training Boards simultaneously raised training standards, and with them total training costs, from the mid-1960s onwards. Employers thus bore a rising share of a rising total cost, with adverse implications for the supply of training places.

Incentives to offer apprenticeships distorted

The result was a distorted system of finance and incentives. Employers did not enjoy the incentive to sponsor sufficient apprentices. Apprentices enjoyed good incentives, or at least no longer bore significant costs: by the mid-1970s the pay and job security of apprentices had become markedly superior to those of comparable youth employees. The difficulty of obtaining an apprenticeship place became notorious.

Aims and unintended consequences of the Youth Training Scheme (YTS)

A reform of apprenticeship which would redivide its costs more appropriately between the employer and the apprentice was a goal, but rarely an achievement, of public training programmes during the 1980s. Certainly the Youth Training Scheme (YTS) drastically cut trainees' incomes relative to those enjoyed by the (then) disappearing apprentice species. But the contribution that the employer was called upon to make was also much less than had been normally expected in traditional apprenticeship. This was principally the result of the lower standards of training aimed for in YTS and YT.

The need to look again at apprentice pay levels

Training provided on Modern Apprenticeship is to higher standards and average apprentice wages are also higher than on YT. In most sectors, it appears that employers do not consider apprentice pay levels excessive. Apprentice pay varies considerably between firms within any one sector and also between sectors. We do not have access to comprehensive information on apprentice pay levels. However, the information we have been able to gather suggests that many apprentices are paid, on average over their apprenticeship, a rate which is around half that of the fully-qualified employee in that sector. This should be compared with Germany where, as we have noted above (Section 3), apprentices normally receive roughly one third the wage of a skilled worker in the relevant sector. We consider that employers have not sufficiently explored the scope for reducing training costs - and thereby offering more apprentice places - which could be achieved by reducing the level of trainee pay. We see no reason why an adequate supply of young people should not come forward - even at lower pay rates - if the training offered is of genuinely high quality. In our final recommendations we return to the question of a separate contractual status for apprentices which allows the negotiation of rates of pay appropriate for high quality training programmes.

'Poaching' reduces incentives to train

The final aspect of apprenticeship finance and incentives concerns the division of costs and returns between employers themselves. As the occupational skills learned in apprenticeship are intrinsically highly transferable between different employers, there is always the prospect that the fruits of an employer's investment in training may be appropriated by a competitor who recruits already skilled workers, the legendary 'poaching' problem. When the cost is borne by one agent and the benefit acquired by another, a classic incentive problem prevails. Both employers then substitute recruitment for training as a source of skills, with adverse effects on the supply of skills upon which both depend.

Three ways to correct incentive failure

The incentive failure can be corrected in various ways. A first approach in a deregulated labour market is to leave employers to determine the content of their apprenticeship programmes. Training can then be tailored to the specific requirements of the sponsoring employer, increasing its hold over its ex-

apprentices. Such a 'solution' is however unattractive. Apprenticeship becomes just another form of job training, with its wider educational and occupational potential undeveloped.

The collective funding approach

A second approach involves collective funding. The pool of potential beneficiary employers contributes to a common pot from which the expenses of those who provide training are reimbursed, in whole or part, thereby rebalancing incentives from recruitment towards training. The statutory levy-grant systems operated in Britain by the Industrial Training Boards of 1964-91, and currently functioning in countries as diverse as France, Australia and Hong Kong, have helped to sustain apprenticeship at levels greater than can be expected from market forces alone. However, Britain's experience with levy-grant has been very mixed and there is currently little or no support from business for its reintroduction.

The collective organisational strategy

A third approach looks to collective organisation and peer pressure. Employer collectives - such as employers' associations, trade associations and Chambers of Commerce - are given powers to influence individual employers to provide apprenticeships, even at some expense to themselves. If such policies are not to fall back on ineffective exhortation, employers' groups must be able to alter the incentives facing individual firms. In Germany, membership of the local Chamber of Commerce is obligatory for employers over a certain size. In addition, employers are encouraged to join employers' associations, for example, by 'extension rules', under which they are required to follow the terms of the collective agreements (e.g. on trainee pay) negotiated at sectoral level by those associations. Such practices remain largely absent in Britain, where the exhortations of a range of bodies - employers' associations, National Training Organisations, Chambers of Commerce and Training and Enterprise Councils - to employers to sponsor training lack any statutory force. We set out the case for measures to strengthen employer and sector-based organisations as a way to increase apprenticeship places offered.

Cost-sharing issues must be openly discussed and resolved

As we have stated above, the proportion of training costs borne by the public purse has increased markedly during the past decade. It seems unlikely that, given other constraints, government will be willing to increase the level of subsidy provided for apprenticeship. We find that the level of apprentice pay is high relative to pay levels of apprentices in other countries, and we consider that there may be some scope for bringing this to a lower level. However, this still leaves employers bearing a considerable proportion of the costs of apprentice training. We therefore conclude that the inadequate supply of apprenticeship places offered by British employers results also from the failure to find a way to share training costs and benefits among all employers who draw some advantage from training. We cannot see that the current operation and mode of delivery of Modern Apprenticeship has addressed this problem. Our proposals for ways of tackling these issues are put forward in our policy recommendations.

The inclusion of technical knowledge would strengthen Modern Apprenticeship in England

We argue that the inclusion of technical knowledge on the lines of City & Guilds and what are commonly known as BTEC qualifications would strengthen Modern Apprenticeship. A technical knowledge component would also make more feasible the building of a clear progression route available on a part-time basis, as in the model of ONC/HNC progression. The inclusion of technical knowledge would make this possible since it would serve as the basis for higher study levels. The failure to offer direct progression from the apprenticeship through to higher education is a significant weakness of the German apprenticeship in its current form. However, more and more young Germans are completing apprenticeships between the *Abitur* (A-levels) and a university degree. In addition, some sectors in Germany are now offering or planning to offer higher education courses which follow on directly from apprenticeship programmes.

Access to apprenticeship

We firmly believe that the character of apprenticeship as outlined above, namely that it is a contract between employer and apprentice freely entered into, should continue to be the cornerstone of the Modern Apprenticeship. This means that access to apprenticeship is decided by employers. If those who can benefit from apprenticeship are to find employers willing to offer places, it will be necessary for apprenticeships to be offered in a wide variety of occupations and sectors. For expansion of apprenticeship to take place many sectors will need to offer a larger number of apprenticeship places than is currently the case. We consider that government and employers should together make firm commitments to ensure that all sectors train in sufficient numbers to meet both current and future skill needs and thereby increase the range of opportunities available to young people.

Pre-apprenticeship for some?

Experience in other countries shows that, when the important issues outlined above have been satisfactorily resolved, the demand for apprentices can be very great and offer opportunities to almost the whole ability range. One of the advantages of a well-established system like the German system is that expectations of the qualities needed for apprenticeship are regularly conveyed back to schools and school students. As a result, schools and students work to produce the qualities sought by employers. Initially, however, it must be accepted that some of those wanting an apprenticeship will not find one because of inadequate prior attainments. A period of pre-apprenticeship training can enhance the chances of a young person of obtaining an apprenticeship in the desired sector. Careful planning of a publicly-funded pre-apprenticeship programme in consultation with local employers could result in many more young people being employed as apprentices. National Traineeships could be adapted to serve a similar purpose in some cases. But we cannot see how any *guarantee* could be given of an offer of apprenticeship if the qualities which give apprenticeship its status and value on the labour market are to be retained.

4.3 MARKETING AND DELIVERY OF MODERN APPRENTICESHIP

Raising employers' awareness of Modern Apprenticeship opportunities

We have already noted that Modern Apprenticeship starts are still low relative to the position at the beginning of the decade and to the stock target figures set by government. One reason for this may be that some demand from employers for funding of Modern Apprenticeships is still unmet as a result of inadequate delivery and a cap on government funding of Modern Apprenticeship. However, it is also widely recognised that information about Modern Apprenticeships is distributed very unevenly among employers. In small and medium-sized firms the potential for apprenticeship places is great, yet evidence shows that in many sectors these companies are still not well-informed about apprenticeship. We consider that additional resources are needed to promote Modern Apprenticeship to all British companies in all sectors so that every company understands the potential of Modern Apprenticeship.

Raising young people's awareness of Modern Apprenticeship

Initial research suggests that employers are well-satisfied with the young people who have been recruited onto Modern Apprenticeship. However, there are still widespread complaints from employers that not enough young people with the desired qualities and academic achievements are coming forward into Modern Apprenticeship. We have suggested that reluctance to enter Modern Apprenticeship may result in part from the limited opportunities offered for progression beyond Level 3. We have also suggested that the NVQ assessment model and the narrowness of the current programmes may deter young people from entering. However, there are also widespread complaints from employers and those connected with Modern Apprenticeship that information on Modern Apprenticeship is not being passed on to young people in schools and colleges through the normal channels - careers education in schools, the Careers Service and the local TEC. We consider that a lead should be taken by NTOs working together in the first instance to set targets for direct marketing of Modern Apprenticeship to all young people in their final years at school or college.

Delivery of Modern Apprenticeship at Local Level

The skill needs of any one sector are not normally confined to any one locality or region of Britain but distributed over the whole country. The delivery of Modern Apprenticeship requires responsiveness to the skill needs of every sector wherever located throughout Britain. But firms and young people alike are relatively static and the process of matching potential apprentices to firms must be carried out at a local level. A number of authoritative sources suggest that this challenge is not being successfully met by the present method of delivery by TECs. In a number of TECs, sector sub-groups are already in place. However, it is difficult to see how all NTOs (55 in place in May 1998) could be represented on sector sub-groups in all of the 71 TECs in England and Wales without a great waste of resources. Thought needs to be given to improvements which ensure that all employers in all sectors wishing to take on

an apprentice are able to access funds and expertise which will allow them to locate suitable candidates for apprenticeship in their area. We see NTOs as gaining a more important role in the delivery of apprenticeship places but would want to see TECs retain a role as local advocates for apprenticeship and co-ordinators of the actions of the different sectors at local level.

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